

REMARKS

Claims 1-12 are in the case and presented for consideration.

Rejection Under 35 U.S.C. § 103

Claims 1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,197,850 to Fernandez, et al. ("Fernandez") or U.S. Patent 6,360,808 to Twardowska, et al. ("Twardowska") in view of WO 00/73236 (or the corresponding U.S. Patent 6,972,059) to Skerdi and U.S. Patent 3,815,665 to Baur. The reasons for the rejection are stated on pages 2-3 of the Office Action. The rejection is respectfully traversed.

Initially, in order to establish a *prima facie* case of obviousness, there must be some suggestion or motivation in the cited reference(s), or in the knowledge generally available to one of ordinary skill in the art, to make the asserted modification to achieve the claimed subject matter. See MPEP § 2143. The Patent Office has the initial burden to provide some suggestion of the desirability of the claimed invention. See MPEP § 2143, fourth paragraph. In addition, the cited reference(s) must provide the person of ordinary skill in the art a reasonable expectation of success in obtaining the claimed subject matter. See MPEP § 2143.02. Moreover, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See MPEP § 2142, third paragraph, and 2143.03.

Applicant respectfully submits that the Office Action has failed to established a *prima facie* case of obviousness. The claimed invention is directed to a procedure for producing exothermic sleeves from a fluoride-free composition, for example, by blow

molding. Claim 1 recites, among other patentable features, a mixture for the production of an exothermic sleeve comprising a fluoride-free composition. However, it is respectfully submitted that Fernandez, Twardowska, Skerdi and Baur, along or in combination, fail to teach or suggest every feature recited in claim 1.

The Office Action asserts that Fernandez and Twardowska shows the invention as claimed except that their exothermic compositions contain fluoride and that they do not teach forming the sleeve as a single piece. The Office Action then relies on Skerdi to show that it is desirable to use a fluoride free exothermic composition and on Baur to show that it is conventional to form the exothermic sleeve as a single piece. Thus, the Office Action concludes that it would have been obvious to form the sleeve and the breaker core of Fernandez and Twardowska as a single piece. Applicant respectfully disagrees with these assertions for the following reasons.

Skerdi (U.S. '059) when considered as a whole would discourage a person of ordinary skill in the art from practicing Applicant's claimed invention, namely fabricating a fluoride-free exothermic feeder. A reference that teaches away from a given combination may negate a motivation to modify the prior art to meet the claimed invention. See Ormco Corp. v. Align Technology, Inc., 463 F.3d 1299, 1308 (Fed. Cir. 2006). In fact, Skerdi explicitly discourages the use of fluoride-free exothermic feeder as it has a number of disadvantages, including the occurrence of unwanted reactions and the formation of a so-called "hollow fire". See Skerdi (U.S. '059), col. 1, lines 50-64. As a result, large cavities are formed in the feeder wall causing iron losses due to penetration of molten iron into these cavities. Also, it is almost impossible re-process the iron in the cavities. See Skerdi (U.S. '059), col. 1, line 65, to col. 2, line 4. To

overcome the problems in the prior art, Skerdi suggests an exothermic feeder or feeder composition that contains an amount of fluoride. See Skerdi (U.S. '059), col. 2, lines 27-29. Therefore, Skerdi not only fails to teach or suggest forming a fluoride-free exothermic feeder, it also leads an ordinarily skilled artisan away from using a fluoride-free exothermic feeder.

The Office Action further relies on DE '229 to show that it is conventional to form the exothermic sleeve as a single piece. See Office Action, page 3, section 3. However, as shown in Fig. 2 of DE '229, the feeder only has a single opening. Therefore, even if assuming *arguendo* that DE '229 teachings fabricating the feeder as a single piece, DE '229 in combination with Fernandez, Twardowska and Skerdi still would not result in the claimed invention which requires or forms two openings, i.e., one opening for receiving a plug and one opening with the internal double chamfer. See Fig. 2B of the instant application.

Based on the foregoing reasons, claim 1 is believed to be patentable. Claims 2-12 depend from claim 1 and by virtue of this dependency contain all the allowable subject matter and limitations of claim 1 and are therefore also allowable under 35 U.S.C. § 103(a). Withdrawal of the rejection of claims 1-12 is respectfully requested.

Evidence of Nonobviousness of the Claimed Invention

Objective evidence or secondary considerations of nonobviousness, such as unexpected results, commercial success, long-felt need, failure of others, copying by others, licensing, and skepticism of experts are relevant to the issue of obviousness and should be considered in determining whether an invention is obvious. See MPEP §

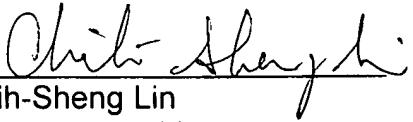
2141(III). The nonobviousness of Applicant's invention is evidenced by the secondary considerations, as fully set forth in the attached Rule 132 Declaration of Santiago Prat Urreiztieta (Exhibit A).

For instance, the claimed invention has met with commercial success which results from the features of the claimed invention (Exhibit B, paragraphs 2 and 4). Prior to Applicant's invention of the claimed subject matter, there was a long felt, but unsolved, need in the metal casting/fabrication industry for such an invention, i.e., a lower cost, fluoride-free exothermic sleeve, but without the problems (e.g., graphite deformation) associated with prior art sleeves that also require a breaker core (Exhibit B, paragraphs 1-5). It is respectfully submitted the secondary considerations of commercial success and a need which has now been met by the claimed invention evidence the nonobviousness of the rejected claims.

Applicant has endeavored to make the foregoing response sufficiently complete to permit prompt, favorable action on the subject patent application. In the event that the Examiner believes, after consideration of this response, that the prosecution of the subject patent application would be expedited by an interview with an authorized representative of the Applicant; the Examiner is invited to contact the undersigned at (845) 359-7700.

Applicant respectfully submits that by this Amendment, the application is believed to have been placed in condition for allowance and such action is respectfully requested.

Respectfully submitted,



Chih-Sheng Lin
Reg. No. 56,402
Attorney for Applicant
ph. (845) 359-7700

Dated: February 6, 2007

NOTARO & MICHALOS P.C.
100 Dutch Hill Road, Suite 110
Orangeburg, New York 10962-2100

Customer No. 21706